

# PUBLIC AND PRIVATE TRANSFERS

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# FLOW IDENTITY AND AGE REALLOCATIONS

Basic flow identity:

$$\underbrace{C(x) - Y^l(x)}_{\text{Life cycle deficit}} = \underbrace{\tau^+(x) - \tau^-(x)}_{\text{Net transfers}} + \underbrace{Y^A(x) - S(x)}_{\text{Asset-based reallocations}}$$

→ Components are further disaggregated **by sector**:

- Public age reallocations
  - Net public transfers = public transfer inflows (in-kind + in-cash) – public transfer outflows
  - Public asset-based reallocations = public asset income – public saving
- Private age reallocations
  - Net private transfers = inter-household + intra-household transfers
  - Private asset-based reallocations = private asset income – private saving

→ Components are further disaggregated **by purpose**: health, education, pensions, etc.

# FLOW IDENTITY AND AGE REALLOCATIONS

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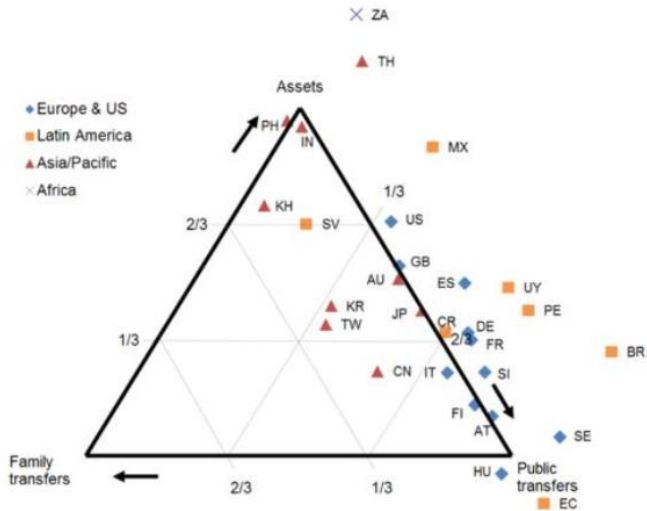
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# LCD FINANCING, INDIVIDUALS 65+



Source: NTA webpage

# AGGREGATE CONTROLS

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- **Basis: Secondary distribution of income account**
  - net national income + **net transfers from the ROW** = net disposable income
  - SNA data can be used to construct complete aggregate controls for public transfers
  - information about private transfers limited
- **Differences:**
  - 1.) Broader definition (+ ITLS on products and production, + whole public consumption is used)
  - 2.) Intersectoral features of the flows:
    - a) private transfers: within private, between private and ROW
    - b) public transfers: between public and private, public and ROW
      - transfers within public sector are excluded
- SNA only includes transfers received/paid by each sector but not the exact direction

# TRANSFER COMPONENTS

1<sup>st</sup> GROUP: mainly paid by households, received by government/corporations

- Taxes less subsidies on products and production:
    - public/private, public/ROW
  - Current taxes on income, wealth, etc.:
    - public/private, public/ROW
  - Net social contributions:
    - public/private, public/ROW, private/private
- In general: Be aware of country specific flows

## TRANSFER COMPONENTS (CONT.)

2<sup>nd</sup> GROUP: mainly paid by government/corporations, received by households

- Public transfers in-kind:
  - public/private
- Social benefits other than social transfers in-kind:
  - public/private, public/ROW, private/private

3<sup>rd</sup> GROUP: Other current transfers

- public/private, public/ROW, private/private
- Current international cooperation: direction is clear – public/ROW
- Net non-life insurance premiums
- Net non-life insurance claims
- Miscellaneous current transfers



Whenever direction of the flow is not clear **intersectoral flow matrix** is needed.



# DIRECTION OF PUBLIC AND PRIVATE TRANSFERS, AUSTRIA, 2010

Net Non-Life Insurance Premia					
from/to	TO public	TO private	TO ROW	TO total	
FROM public			0	0	0
FROM private		5,549	34		5,583
FROM ROW		156			156
FROM total	0	5,705	34		5,739
Net Non-Life Insurance Claims					
from/to	TO public	TO private	TO ROW	TO total	
FROM public					0
FROM private	0	5,533	172		5,705
FROM ROW	0	11			11
FROM total	0	5,544	172		5,716
Miscellaneous Current Transfers					
from/to	TO public	TO private	TO ROW	TO total	
FROM public		4,602			4,602
FROM private	3,713	0	1,025		4,738
FROM ROW		680			680
FROM total	3,713	5,282	1,025		10,020
Social Contributions					
from/to	TO public	TO private	TO ROW	TO total	
FROM public					0
FROM private	46,149	3,934	288		50,371
FROM ROW	439	37			476
FROM total	46,588	3,971	288		50,847
Social Benefits other than Social Transfers in Kind					
from/to	TO public	TO private	TO ROW	TO total	
FROM public		55,677	687		56,365
FROM private		2,119	26		2,145
FROM ROW		627			627
FROM total	0	58,423	713		59,137

# TRANSFER ACCOUNT, AUSTRIA, 2010

Variable abbreviation	Variable Name	Value (mill. of national currency)
T	Transfers	-1,828
TG	Public Transfers	-2,356
TGI	Public Transfer, Inflows	115,813
TGIC	Public Transfer Inflows, in cash	Net from the ROW
TGII	Public Transfer Inflows, in kind	55,354
TGO	Public Transfer, Outflows	118,169
TGF	Taxes	66,884
TGP	Social Contributions	46,149
TGX	Other Revenue	3,713
(TD)	Transfer deficit/surplus	1,423
TF	Private Transfers	528
TFB	Inter-household Transfers	528
TFW	Intra-household Transfers	Net from the ROW
TFI	Private Transfers, Inflows	1,553
TFBI	Inter-household transfers, Inflows	1,553
TFWI	Intra-household transfers, Inflows	na*
TFO	Private Transfers, Outflows	1,025
TFBO	Inter-household transfers, Outflows	1,025
TFWO	Intra-household transfers, Outflows	na*

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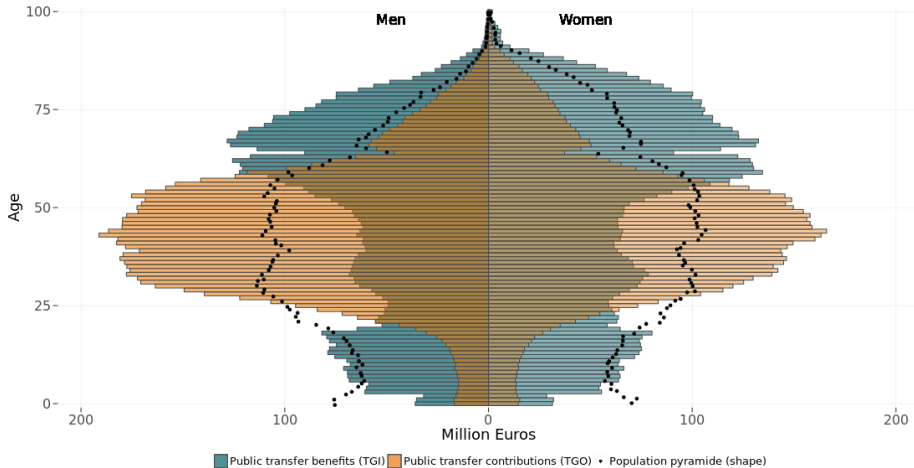
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In NTA usually estimated from survey data

# PUBLIC TRANSFERS

# PUBLIC TRANSFER INFLOWS (TGI) AND PUBLIC TRANSFER OUTFLOWS (TGO), AGGREGATE VALUES BY AGE AND GENDER, SLOVENIA, 2010

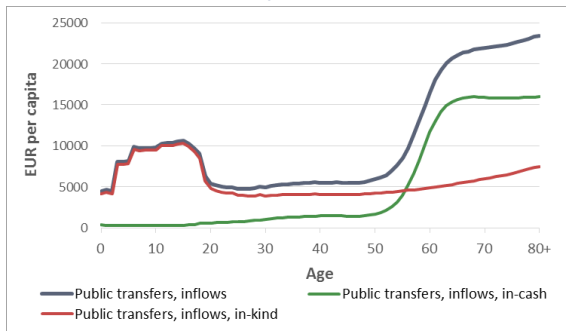


Source: Istenič, Hammer, et al., 2017

# PUBLIC TRANSFER INFLOWS

- Flows from the government to the beneficiaries of the public programs
- public transfer inflows in-kind = public consumption
- public transfer inflows in-cash: direct payments by the government to the individuals

Italy, 2010



Source: Istenič et al., 2017

# PUBLIC TRANSFER INFLOWS IN-CASH

**Subcategories:** education; health; pensions; other cash transfers: unemployment, housing, family and children allowances, miscellaneous social protection

## **Macro controls:**

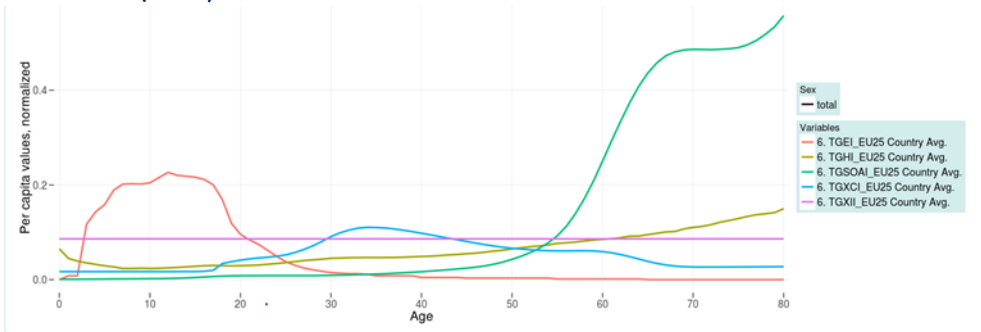
- Total values are based on SNA
- Total values must be divided into subcategories for different public programs (government expenditure reports or other administrative data, GFS database provided by IMF, etc.)



# PUBLIC TRANSFER INFLOWS IN-CASH (CONT.)

## Age profiles:

- Transfers are assigned to the beneficiaries of specific public program, based on:
  - Administrative data (reports on benefits/beneficiaries by age)
  - Survey data: reported at the individual level, at the household level (assigned to the beneficiaries, to the HH head, to all the adults, etc.)



# PUBLIC TRANSFER OUTFLOWS

- the current flows that fund public transfer inflows

- SUBGROUPS:

1.) Distinguished **by purpose**: education, health, pensions, other in-kind, other cash

→ Macro controls: net public transfers of the residents = net from the ROW (holds for each program)

2.) Distinguished **by source**: taxes, social contributions, grants, other current transfers, (transfer deficit/surplus)

→ Macro controls: more detailed info. from SNA, etc.

## PUBLIC TRANSFER OUTFLOWS: AGE PROFILES

- **by purpose:** the sources of funding can vary significantly

(may rely more heavily on earning taxes, on consumption taxes, etc.)

- **by source** - estimated using:
  - survey data
  - administrative records
  - the age profile of the activity being taxed (ex. taxes on consumption → private consumption age profile)

# MAPPING OF SNA TAXES TO TAX SOURCE

Tax source	SNA classification
Consumption	Value added type taxes (VAT)
	Taxes and duties on imports excluding VAT
	Less: import subsidies
	Other taxes on production and imports
Consumption of alcohol and/or tobacco	Less: Other subsidies on products
	Monopoly revenues and excise and stamp taxes from tobacco and alcohol
Labour income	Export taxes*
	Less: export subsidies*
	Other taxes on production*
	Less: other taxes on production*
	Employers' actual social contributions
	Employees' actual social contributions
Asset income	Social contributions by self- and non-employed persons
	Imputed social contributions
	Export taxes*
	Less: export subsidies*
	Other taxes on production*
	Less: other taxes on production*
Income	Individual income tax*
	Corporate income tax
Various	Individual income tax
	Other current taxes

\* Taxes are allocated in proportion to the shares of labour and asset income.

Source: *United Nations, 2013*

# MAPPING OF GFS DATA TO NTA OUTFLOWS

GFS classification	Suggested NTA tax source
<b>Taxes</b>	
Taxes on income, profit, and capital gains	
Payable by individuals	Labour and asset income*
Payable by corporations and other enterprise	Asset income
Taxes on payroll and workforce	Labour income
Taxes on property	Asset holding
Taxes on goods and services	Consumption
Taxes on international trade and transactions	Various
Other taxes	Various
<b>Social contributions</b>	<b>Labour income</b>
<b>Subsidies</b>	
To public corporations	Various
To private enterprises	Various
<b>Grants</b>	
From foreign governments	
Current	Rest of the world
Capital	Exclude from NTA flow account
From other general government units	Zero for general government
<b>Other revenue</b>	
Property income	Not a public transfer (Asset income)
Sales of goods and services	Other
Fines, penalties, and forfeits	Other
Voluntary transfers other than grants	
Current	Other
Capital	Exclude from NTA flow account
Miscellaneous and unidentified revenue	Other

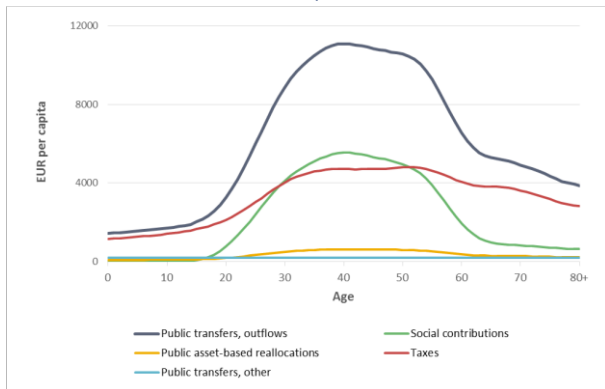
\* In the absence of additional information, taxes are allocated in proportion to the shares of labour and asset income.

Source: *United Nations, 2013*

# PUBLIC TRANSFER OUTFLOWS (CONT.)

- if public outflows are insufficient to finance inflows, a public transfer deficit is generated (=positive public ABR), otherwise transfer surplus (=negative public ABR)

Slovenia, 2010



Source: Istenič et al., 2017

# PRIVATE TRANSFERS

# PRIVATE INTER-HOUSEHOLD TRANSFERS

- transfers like gifts, monetary allowances, donations, transfers from family members working abroad (**remittances**), etc.
- **Macro controls:** the SNA data is limited



**net private transfers from the ROW =**

= private transfer inflows – private transfer outflows

- inflows/outflows estimated using survey data
  - per capita averages  $\times$  age-specific population
  - Adjustment is needed:
    - Proportional adjustment (same scaling factor)
    - Split the difference
    - Adjust inflows or outflows only

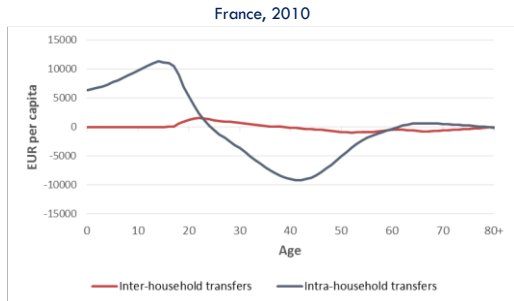


# PRIVATE INTER-HOUSEHOLD TRANSFERS (CONT.)

## ■ Age profiles:

- based on survey data (variables that capture cash or in-kind gifts, payments received/paid by the HH)
- reported on the household level → flowing to/from the household head

## ■ relative importance of inter- and intra-household transfers

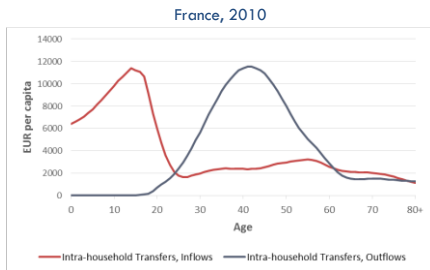


# INTRA-HOUSEHOLD TRANSFERS

- an indirect estimation method
- data: 1.) only one data source for income and consumption  
2.) two data sources: household structure from one survey + already calculated age profiles

## IN GENERAL:

- non-head members with the deficit receive inflows from members in surplus
- if household total deficit  $>$  household total surplus  
→ deficits are financed by household heads (ABR)



Source: Istenič et al., 2017

# INTRA-HOUSEHOLD TRANSFERS

## ESTIMATION PROCEDURE

- 1.) **individual deficit** = consumption – disposable income
  - consumption = private consumption (excluding housing)
  - disposable income = labour income + public inflows in-cash + net inter-hh transfers – taxes paid
  
- 2.) intra-household transfer **inflows**
  - non-head members with the deficit receive inflows from members with the surplus or from the household head
    - the “tax rate” (= share of individual’s surplus) is the same for all the members
  - if household total deficit > household total surplus → deficits are financed by household heads (private ABR)

## INTRA-HOUSEHOLD TRANSFERS (CONT.)

### 3.) intra-household transfer **outflows**

- outflows for non-household heads = individual surplus
  - part is transferred to non-heads (according to the tax rate)
  - remaining to the head
  
- outflows of the household head =  
= the tax rate  $\times$  the household head individual surplus +  
+ total remaining deficit of other household members  
(shortfall is financed through ABR)

### 4.) intra-household transfer inflows/outflows by function (education, health, other)

- inflows for each function are proportional to the individual consumption of that function
- outflows for each function are proportional to the total inflows for each sector

# AN EXAMPLE OF MACRO CONTROLS TABLE



Ageing Europe – An Application of  
National Transfer Accounts for Explaining  
and Projecting Trends in Public Finances

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NTA 2010 Data

NTTA Data

NTA Variables



## Methodology and Variables



Ageing Europe – An Application of  
National Transfer Accounts for Explaining  
and Projecting Trends in Public Finances

### NTA methodology and variables

European NTA provide age- and gender-specific data on income, transfers, consumption and saving. The estimation approach is similar for most of the variables:

1. In a first step the European System of Accounts and related data to estimate the aggregate values, i.e. the quantities of income, transfers, consumption and saving for the economy as a whole.
2. In a second step, the distribution of these variables over age groups and genders is estimated using survey data and administrative data.

In the following description of the variables, we give an intuitive interpretation of each variable, including a short description of the aggregate values and the method of estimating the distribution over age groups. For more details please consult the manuals.

### Aggregate values:

The Excel-file for the aggregate values contains data that are required for the calculation of NTA aggregate (=total economy) values and shows how the calculations are done.

THANK YOU